

### **REMARKS**

Claims 1-10 are pending in the instant application. Claim 10 is withdrawn from consideration as directed to non-elected subject matter that was subject to a Restriction Requirement. No claims are currently amended, added, or cancelled.

The Examiner has maintained the restriction requirement between Group I, claims 1-9, and Group 10, and has made the restriction requirement final. As set forth in further detail below, the Applicants maintain the traversal of the restriction requirement for purposes of preserving the right to petition the Examiner's decision until after final action on or allowance of claims to the invention elected.

Claims 1-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Miyajima et al. (U.S. Pre-Grant Pub. No. 2002/0015748) in view of Lee et al. (European Patent Pub. No. 0997498). The Applicants respectfully continue to traverse the rejection of claims 1-9 under 35 U.S.C. §103(a) over Miyajima et al. in view of Lee et al. on the basis that the Examiner has failed to properly establish that every element of independent claim 1 is taught by the combination of Miyajima et al. and Lee et al., and that the Examiner has failed to properly establish obviousness through optimization of a known result-effective variable such that one of skill in the art would **not reasonably have been expected** to practice the invention claimed in independent claim 1 based upon the combined teachings of Miyajima et al. and Lee et al.

### **As to the Finality of the Restriction Requirement**

The Applicants recognize that the Examiner has made the restriction requirement final, despite the Applicants' traversal. The Applicants respectfully reserve the right to

petition the Examiner's restriction requirement, which has resulted in the withdrawal of claim 10, until after final action on or allowance of claims to the invention elected. See CFR §1.144. In this regard, for purposes of maintaining the right to petition the Examiner's restriction requirement, the Applicants maintain the request for the Examiner to reconsider the restriction requirement on the same bases as previously set forth.

**As to the Rejection of Claims 1-9 Under 35 U.S.C. §103(a) Over Miyajima et al. in View of Lee et al.**

As alluded to above, the Applicants respectfully traverse the rejection of claims 1-9 under 35 U.S.C. §103(a) over Miyajima et al. in view of Lee et al. In particular, the Applicants respectfully submit that the Examiner has failed to establish that Miyajima et al. and Lee et al. teach every element of independent claim 1, and that the Examiner has improperly relied upon the doctrine of obvious optimization of a known result-effective variable to establish the instant rejections.

The Applicants previously noted that 35 U.S.C. §103 forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). As the Examiner is aware, the question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) secondary considerations.

*Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). See also *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. at 1734, 82 USPQ2d at 1391 (2007). As succinctly summarized in MPEP 2141(II.), the focus when making a determination of obviousness should be on what a person of ordinary skill in the pertinent art **would have known at the time of the invention, and on what such a person would have reasonably expected to have been able to do in view of that knowledge** (emphasis added). In this context, the Applicants further note that there must be a reasonable expectation of success to properly establish obviousness in view of modified or combined teachings in the references(s) relied upon (see MPEP 2143.02).

Further, it remains a fundamental tenet of the obviousness analysis that reference(s) relied upon to establish an obviousness rejection must teach or suggest each and every feature of a claim. In particular, MPEP § 2143.03 requires the "consideration" of all words in a claim in an obviousness determination. However, to render a claim unpatentable, the Examiner must do more than merely "consider" each and every feature of the claim. In particular, the asserted reference(s) must also teach or suggest each and every claim feature. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (to establish prima facie obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art). Indeed, a proper obviousness determination requires that an Examiner make "a searching comparison of the claimed invention - including all its limitations - with the teaching of the prior art." (Emphasis added) See *Ex parte Wada and Murphy*, Appeal 2007-3733, (citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995)). This is supplemented by MPEP § 904, which states that the Examiner's search "should cover the invention as described and claimed." These principles

remain unchanged by the decision in *KSR Int'l Co. v. Teleflex Inc.* Thus, it remains fundamental that to establish a *prima facie* case of obviousness of a claim, **prior art references, after combination, must still teach or suggest all of the claim elements.**

In addition to the above, the doctrine of obvious optimization of a known result-effective variable has been relied upon by the Examiner to support the obviousness rejection of claim 1. In this regard, the Applicants recognize that optimization of known result-effective variables can provide a basis for establishing *prima facie* obviousness under some circumstances. Referring to MPEP 2144.05, “[g]enerally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical”. Indeed, **“where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”** (Emphasis added, see MPEP 2144.05(II)(A.)). However, referring to MPEP 2144.05(B.), “[a] **particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result,** before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.” (Emphasis added, citing *In re Antonie*, 559 F.2d 618). As such, a key focus of the “routine optimization” analysis is whether there is a **recognition in the art that the variable to be optimized achieves a recognized result,** and it cannot be determined that optimization would be routine until a recognized result to be achieved is identified.

As made clear through the foregoing references to the MPEP, it is imperative that the optimization analysis be tied to a particular result achieved by the variable at issue, and a proper analysis must explain why it would be routine to optimize the variable to arrive within the confines of the claimed range at issue. After all, if the prior art teaches or suggests a beneficial result that is attributable to higher amounts of a given component, it clearly cannot be concluded that one of skill in the art would include lower amounts of the component outside of the disclosed range in the prior art to “optimize” the amount of the component.

In the instant rejections, the Applicants respectfully submit that the Examiner has failed to properly account for the claimed times that it takes for the silicone composition to grow from 1 kgf•cm to 5 kgf•cm as specified in independent claim 1. The Examiner has focused upon the disclosure, in Lee et al., of a hydrosilylation-curable liquid silicone composition that has a viscosity of less than 90 Pa•s at room temperature. Based upon the disclosure of Lee et al., the Examiner has concluded that the structure of the material used in the prior art is the same as that being claimed and disclosed in the specification of the instant application because both materials are the same in structure and the viscosity used in the prior art meets the claimed viscosity. However, the Applicants respectfully submit that commonality between the instantly claimed compositions and the compositions of Lee et al. in terms of an initial viscosity at room temperature cannot be extended to infer that the composition of Lee et al. have torques that grow from 1 kgf•cm to 5 kgf•cm within a period of less than 1 minute. With reference to the Examples contained in the instant application, the Examiner surely appreciates that the time it takes for the torques to grow from 1 kgf•cm to 5 kgf•cm are not only dependent upon the

composition, but are also attributable to processing parameters (such as the temperature at which the composition is cured). Indeed, the very same silicone composition can exhibit different periods of time for which torque grows from 1 kgf•cm to 5 kgf•cm depending upon the processing parameters (see curable liquid silicone rubber compositions (A)-(D) in Table 1 on page 15 of the original application as filed).

Referring to an Office Action mailed on March 17, 2010 (which was improperly made final and resulted in the issuance of the instant Office Action), the Examiner commented on the instantly claimed torques and times, but relied upon the doctrine of obvious optimization of a known result-effective variable to find a teaching of the claimed torques and times in the prior art. As set forth above, for the Examiner to rely upon the doctrine of obvious optimization of a known result-effective variable, it must first be proven by the Examiner that a particular variable is recognized in the art to be a known result-effective variable. In the Office Action of March 17, 2010, the Examiner argued that “the time required for the torque to reach 1 kgf•cm and the time required for the torque to grow from 1 kgf•cm to 5 kgf•cm are a result of several things such as the rate of crosslinking of the polymer and whether the material is a strain-rate sensitive or shear thinning type material such that time torque at the various times is a result-effective variable”. The Applicants respectfully submit that the Examiner’s position does not address the relevant analysis when determining whether a particular variable is an art-recognized result-effective variable. In particular, the Examiner’s statements fail to support the premise that torque at the various times is recognized in the art to be a variable that achieves a recognized result. As an example of an instance in which a variable could be deemed to be

recognized in the art to be a result-effective variable, the Applicants' comments in the prior response (filed on December 22, 2009) explain that when it takes too long to grow from 1 kgf•cm to 5 kgf•cm, warping of the semiconductor chip is experienced. However, the prior art fails to recognize that the time it takes for the silicone composition to grow from 1 kgf•cm to 5 kgf•cm is a variable that affects warping of semiconductor chips, and the prior art fails to recognize any other results of consequence based upon the time it takes to grow from 1 kgf•cm to 5 kgf•cm during curing of the silicone composition. As such, the Applicants respectfully submit that the Examiner cannot properly rely upon the doctrine of obvious optimization of a result-effective variable to reject the instant claims over the combined teachings of Miyajima et al. and Lee et al.

As an aside, the Applicants note that in the Examiner's comments contained within the Office Action that was mailed on March 17, 2010, the Examiner noted that various features (such as the goal of minimizing warping, preventing void formation, a range of curing/molding temperatures) were not included in the claims such that various arguments against the obviousness rejections were basically ignored. The Applicants submit that the prior arguments that noted such variables as minimizing warping, preventing void formation, and the range of curing/molding temperatures were merely relied upon to illustrate the significance of the variables that are claimed by highlighting particular goals/results that are achieved through conducting the claimed method within the parameters for the times to grow torque from 1 kgf•cm to 5 kgf•cm. The aforementioned variables need not be claimed, but only serve to prove the significance of the subject matter that is claimed.

In view of the foregoing, the Applicants respectfully submit that the Examiner has failed to properly establish obviousness of independent claim 1 over Miyajima et al. in view of Lee et al. due to the failure to properly account for a teaching of the instantly claimed times to grow torque of the silicone composition from 1 kgf•cm to 5 kgf•cm in the prior art. As such, the Applicants respectfully submit that the rejection of claims 1-9 under 35 U.S.C. §103(a) over Miyajima et al. in view of Lee et al. is overcome and must be withdrawn. The Applicants further submit that the claimed combination of viscosity of the silicone composition and specified time to grow torques from 1 kgf•cm to 5 kgf•cm provide significant unexpected results (as illustrated in Table 2 on page 17 of the original application).

The Applicants respectfully submit that independent claims 1-9 are in condition for allowance, which allowance is respectfully requested. This Response is being filed timely and it is believed that no fees are presently due. However, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to the undersigned's deposit account 08-2789.

Respectfully submitted,

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